

FEDOSENKO, R.Ya., kand. tekhn. nauk (Moskva); REYNVALD, O.A. [Reinvalds, O.]
(Riga); GNEVKO, D.G., inzh. (Minsk); ZAROZHNYI, A.M., inzh. (Minsk);
VOYTKO, A.M., inzh. (Minsk); FEDOROV, Ye.Ya., inzh. (Minsk);
AYZENBERG, B.L., doktor tekhn. nauk (Leningrad)

Protection of closed-loop networks. Elektrichestvo no.2:
83-89 F '65. (MIRA 18:3)

S/124/63/000/002/010/052
D234/D308

AUTHOR: Voytko, A.M.

TITLE: Investigation of heat loss during a spiral motion
of air in a pipe

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 75,
abstract 23478 (Tr. Odessk. tekhnol. in-ta pishch.
i kholodil'n. prom-sti, 1961, v. 10, 118-124)

TEXT: The author experimentally determined the values of
the heat exchange coefficient for spiral motion of air in pipes of
different diameters. The experimental installation is described
and some results of the experiments are given. 3 references.
[Abstracter's note: Complete translation]

Card 1/1

VOYTKO, D. I.

Voytko, D. I. "Selective breeding on the Bol'shoye Alekseyevskoye pig-raising sovkhos", Doklady (Mosk. s.-kh. akad. im. Timiryazeva), Issue 8, 1948, (In index: 1949), p. 192-200.

SO: U-411, 17 July 53, (Letopis' Zhurnal 'nkh Statey, No. 20, 1949).

VOYTKO, D. I.

Swine

Perfecting the swine herd on the Bolshevik State Breeding Farm. Sots. zhiv 14
No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December ² 1951, Uncl.

1. VOYTKO, D. I.
2. USSR (600)
4. Swine Breeding
7. Methods of breeding work on state swine breeding farms. Sots. zhiv. 14 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.

VOYTKO, D. I.

Swine Breeding

Improving the Large White breed of pigs at the "Pol'shoe Aleksaevskoe" State Farm.
Sov. zootekh. 8, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

Voytko, D.
USSR/General Division - History. Classics. Personalities.

A-2

Abs Jour : Ref Zhur - Biologiya, No 7, 10 April 1957, 25682
Author : Voytko, D.
Inst :
Title : Academician M.F. Ivanov: 20 Years Since the Day of His
Death.
Orig Pub : Kolkhoznik Belorussii, 1955, No 10, 19
Abst : No abstract.

Card 1/1

VOYTKO, Denis Iosifovich; BUTYLIN, G., redaktor; STSYAPANOVA, M.,
tekhnicheskij redaktor

[Breeding work on a swine farm] Pleniennais rabota na svinehodouchai
ferme. Minsk. Dzierzhaunae vyd-va BSSR, 1957. 121 p. (MLRA 10:10)
(Swine breeding)

VOYTKO, D.I., kand. sel'skokhozyaystvennykh nauk

Effective method of raising swine productivity. Trudy "Ask.-
Nov." 6:105-112 '57. (MIRA 11:12)
(Swine--Feeding and feeding stuffs)

USSR / Farm Animals. Swine.

Q

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 21254

Author : Voytko, D. I.

Inst : Not given

Title : Improving the Byelorusskaya Black-spotted Breed Swine

Orig Pub : Zhivotnovodstvo, 1958, ²⁷No 7, 51-54

Abstract : In individual rayons of Minskaya oblast' complex crossing of local swine with the large white, Berkshire and the medium white breeds was carried out for many years. At the present time, about 20 thousand of black-spotted pigs are estimated to exist in Byelorussia which were obtained by breeding complex hybrids which are adapted to the local feeding conditions. The Byelorusskaya breed black-spotted pigs tend to be of meat-lard quality, they attain rather large

Carl. Zaveduyushchiy otdelom svinovodstva Belorusskogo nauchno-issledovatel'skogo instituta zhivotnovodstva.
(Minsk Province--Swine breeding)

USSR / Farm Animals. Swine.

.. Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 21254

proportions under normal feeding and are distinguished by a high productivity. They are of a strong build, their body's trunk is fairly long, deep and broad, their head is not big, has a normally elongated profile and ears which protrude forward. Within the plan of breeding according to rayons of the BSR (Byelorussian Soviet Socialist Republic), the raising of black-spotted pigs has been provided for in Minskaya and Mogilevskaya oblast's, as well as at a number of rayons of the Grodnenskaya and Brestkaya oblast's. Volume I of the Government's Breeding Book of black-spotted swine is being prepared for publication. -- K. S. Bogdanov

Card 2/2

SHUMSKIY, P.I., otv. red.; GAYKO, A.A., red.; VOYTKO, D.I., red.;
KARELIN, V.N., red.; NAGORSKAYA, Ye.D., red.; SOLNTSEV,
K.M., red.; SIDORENKO, G.M., red.; DOMASHEVICH, O., red.

[Increasing the production and improving the quality of
meat; transactions of the White Russian Research Institute
of Animal Husbandry] Uvelichenie proizvodstva i uluchshenie
kachestva miasa; trudy Belorusskogo nauchno-issledovatel'-
skogo instituta zhivotnovodstva. Minsk, Izd-vo "Urozhai,"
1964. 155 p. (MIRA 17:7)

1. Minsk. Instytut zhyvelahadouli.

VOYTKO, D.I., kand.sel'skokhozyaystvennykh nauk

Place of inbreeding in swine raising. Zhivotnovodstvo
23 no.7:63-68 JI '61. (MIRA 16:2)
(Inbreeding)
(Swine breeding)

MALININ, S.N.; LUPINOVICH, I.S.; MOLOCHKO, I.S.; ABRAMCHUK, A.P.; ALEKSEYEV, Ye.K.; AL'SHIK, P.I.; AMBROSOV, A.L.; ANDREYEVA, N.M.; ANOKHIN, A.N.; AFONIN, M.I.; BABOSOV, M.M.; BALOBIN, V.N.; BARANOVSKIY, A.I.; BEZDENKO, T.T.; BEL'SKIY, B.B.; BOBKOVA, A.F.; BOL'SHAKOVA, V.P.; BULGAKOV, N.P.; VAGIN, A.T.; BIL'DFLUSH, R.T.; VIL'CHINSKIY, A.D.; VLASOVA, K.S.; VOYTKO, D.I.; VOLUZNEV, A.G.; GABYSHEV, M.F. [deceased]; GAYKO, A.A.; GALASHEV, M.A.; GOREGLYAD, Kh.S.; GARKUSHA, I.F.; GOSTILOVSKAYA, M.N.; GORBUNOVA, N.N.; GORSKIY, N.A.; GORFINKEL', Z.Sh.; GRUBILKO, N.P.; GUSAKOV, V.A.; GUDAYKIN, A.I.; DANILOVICH, A.P.; DEMENT'YEV, V.A.; DENISOV, Z.N.; DOROZHKIN, N.A.; DUBOV, A.B.; DUBOVSKIY, Ya.K.; YEVTIKHIYEV, B.Ye.; ZHARIKOV, I.S.; ZHILIN, A.P.; ZHOLNEROVICH, A.M.; ZHURAVEL', B.N.; ZABELLO, D.A.; ZAKHARENKO, G.D.; ZUBETS, V.M.; IVITSKIY, A.I.; KACHURO, I.M.; KEDROV-ZIKHMAN, O.K.; KIDALINSKIY, V.A.; KIPENVARLITS, A.P.; KOVALEVSKIY, G.T.; KOVAL'CHUK, P.P.; KOZHANOV, K.Ya.; KOZLOVSKIY, I.Ye.; KOCHETOVA, Z.H.; KRIVODUBSKIY, I.P.; KUDRYAVTSEV, S.F.; KUSTOVA, A.I.; LAPPO, A.I.; LARIONENKO, V.B.; LASHKEVICH, G.I.; MAL'CHEVSKIY, V.I.; MAN'KO, N.F.; MARKOVETS, A.F.; MATSEPURO, M.Ye.; MEDVEDEV, A.G.; MEL'TSER, Ya.D.; MOISEYEV, I.G.; MUSORIN, V.V.; MUKHIN, N.D.; NAGORSKAYA, Ye.D.; MALIBOTSKIY, S.B.; NIKOLAYEVA, Yu.N.; NEDOLUGOV, I.T.; ORLOVSKIY, I.A.; ORLOVSKIY, K.P.; PANKOVICH, A.A.; PESKIN, A.L.; PROKOPOV, P.Ye.; PUSHKAREV, I.I.; RAZMYSLOVICH, I.R.; RAZUMENKO, A.V.; REMIEVA, Z.I.; RINKIS, V.A.; ROVDO, A.I.; ROGOVOY, P.P.; ROZENBLYUM, B.N.; RYZHIMANOV, A.G.; RUSINOV, A.A.; SIVCHENKO, A.I.; SAPUNOV, V.A.; SAFRONOV, I.P.; SVIRSKIY, Ya.N.; SEVERNYEV, V.P.; SERGEYEV, I.V.; SEMENOV, A.L.; SIDORENKO, G.M.;

(Continued on next card)

MALININ, S.N.---(continued) Card 2.

SKOROPANOV, S.G.; SKRIPNICHENKO, L.A.; SMIRNOV, T.Ye.; STAROVOYTOV, K.T. [deceased]; STRELKOV, I.G.; SUSLOV, V.P.; SUKHORUKOV, G.Ye.; SYUBAROV, A.Ye.; TIMOSHININ, V.D.; TISHKEVICH, I.I.; TROPASHKO, I.N.; TRIZNO, S.I.; TRIHA, N.K.; TUZOVA, R.V.; TURETSKIY, R.L.; UMANSKIY, M.M.; UR'YEV, I.M.; KHOT'KO, A.I.; KHROBOSTOV, S.N.; TSE-KHANOVICH, P.V.; CHERNYAVSKIY, I.G.; CHULKOVA, Ye.I.; CHUNOSOV, M.N.; SEMPPEL', V.I.; SHIKHALEYEV, N.F.; SHKLYAR, A.Ye.; SHCHERBOV, N.A.; YURGINS, B.A.; YUSKOVETS, M.K.; YAKOVLEV, B.I.; YAKERSON, S.A.; YAROSHEVICH, A.A.; LUTSENKO, M.N., red.; LARIN, V., red.; KALECHITS, G., tekhn.red.

[Measures for increasing agricultural production per 100 hectares of land on collective and state farms of White Russia] Meropriyatiya po uvelicheniyu proizvodstva sel'skokhozyaystvennoi produktsii na 100 gektarov zemel'nykh ugodii v kolkhodzakh i sovkhodzakh BSSR. Red.kolle-giya; I.S.Lupinovich i dr. Minsk, Gos.izd-vo BSSR. Red.sel'khoz.lit-ry, 1959. 601 p.

(MIRA 13:4)

1. White Russia. Ministerstvo sel'skogo khozyaystva.
(White Russia--Agriculture)

GAYKO, A.A. [Haiko, A.A.], kand.sel'skokhoz.nauk; VOITKO, D.I. [Voitka, D.I.],
kand.sel'skokhoz.nauk; ORLOVSKIY, I.A. [Arlovski, I.A.], kand.
sel'skokhoz.nauk; RYKIS, Y.A., kand.sel'skokhoz.nauk; GURIN, M.
[Huryu, M.], red.; KALECHITS, G. [Kalechyts, H.], tekhn.red.

[Breeding work with livestock breeds of greatest interest in the
agricultural planning of White Russia] Planiannais rabota
z planavymi parodami sel'skhaspadarchai zhyvely Belaruskai SSR.
Minsk, Dziarsh.vyd-va BSSR, Red.sel'skhaspadarchai lit-ry,
1960. 198 p. (MIRA 14:3)

(White Russia--Stock and stockbreeding)

VOYTKO, Dionisiy Iosifovich; DCHASHEVICH, O.F., red.

[Methods of breeding and improving swine strains] Metody
razvedeniia i sovershenstvovaniia porod svinei. Minsk,
Urozhai, 1964. 296 p. (MIRA 18:1)

VOYTOVICH, V.B.; MELESHKO, V.P.

Verification of the layer theory for computing the processes
of cationation of dilute solutions. Trudy VGU 49:65-70 '58.
(MIRA 13:5)

(Ion exchange)

VOYTKO, D. I., kand.sel'skokhoz.nauk; GAYKO, A.A., kand.sel'skokhoz.nauk

System of breeding work on White Russian farms. Zhivotnovodstvo
21 no.10:70-73 0 '59. (MIRA 13:2)

1. Belorusskiy nauchno-issledovatel'skiy institut zhivotnovod-
stva.

(White Russia--Stock and stockbreeding)

VOYTKO, L. M.

26971 KHARIN, A. N. , VOYTKO, L. M. - Issledovaniye dinamiki sorbtsii koriandrovo-zfirnogo masla iz vodnykh rastvorov krupnoperistym uglem. (Sobshch, 2) Zhurnal prikl. Khimii, 1949, No 8, S. 835-45 --Bibliogr: 11 nazv.

SO: Leptopis' Zhurnal'nykh Statey, Vol. 36, 1949

VOYTKO, L-M

U S S R .

✓ Uptake of substances by granulated carbon from flowing

solutions. III. Study of the sorption dynamics for essential oils over a large range of flow velocities of the solutions. A. N. Kharin and I. M. Volkov (Petrozavodsk, and Trusharskiy, Krasnodar). *Zhur Priklad. Khim.* 22, 1191-1207 (1949). ~~1949~~ 45, 1201. The dynamics were studied for the sorption of essential oils from solutions and vapors in the case of flow velocities of flow velocities. The flow velocities were varied in the range of 0.1 to 1.0 cm/sec. The results are compared with the theory of unsteady-state diffusion. $\alpha = 40 \times 10^{-6}$ cm²/sec. for higher flow velocities.

VOYTKO, L. M.

USSR/Chemistry - Oil, Coriander
Sorption by Carbon

Aug 49

"Research on the Dynamics of Sorption of Coriander Essential Oil From Water Solutions by Carbon Which is Coarsely Porous," A. N. Kharin, L. M. Voytko, 11 pp

"Zhur Prik Khim" Vol XXII, No 8

Results of this study are in conformity with the conclusions of the theory of Zhukhovitskiy, Zavezhinskiy, and Tikhonov. They showed that the neutralized kinetic coefficients of sorption of coriander essential oil derived from this theory make it possible to predict the asymptotic curve for the relation between the protecting screen interval and the length of the carbon film under different conditions. Submitted 2 Aug 48.

PA 67/49T70

VOYTKO, L. M.

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Dynamics of the sorption of essential oil of roses from aqueous solutions on to grains of activated carbon. A. N. Kharin and L. M. Voytko. *J. Appl. Chem. U.S.S.R.* 23, 397-403 (1952) (Engl. translation); *Zhur. Priklad. Khim.* 25, 362-72 (1952).—The dynamic sorption of essential oil of roses on granular C was studied by taking into account the previous expt. of the authors (*C.A.* 46, 8020d, 8100d). The essential oil of roses from Simferopol, contg. phenylethyl alc. (I) 55, citronellol (II) 30, geraniol 2, stearoptenes 6, acids 1, and phenols 0.5, was used. From this oil a 0.03% water soln. was prepd. for the slots. For control, several separate sorption tests were made with I and II. Dynamic expts. with these solns. were carried out as mentioned in previous articles. There is some differentiation of the main components of the oil; II is more strongly adsorbed in the initial portion of the C layer, whereas I is held back to the final portion. This sepn. is incomplete. The time of operation of a C layer can be calcd. approx. from the sorption isotherms for rose oil at a given temp. With longer time of operation of the adsorber and sufficient length of C layer, the distribution of separate substances should be appreciably differentiated. Several tables of data and soln. curves and surface tension isotherms are given. A. Hains.

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CA VOYTKO, L.M.

The dynamics of sorption of coriander essential oil from aqueous solutions by coarse-porous charcoal. A. N. Kharin and L. M. Voytko. *Zhur. Priklad. Khim.* 23, 625-26 (1949); *cf. C.A.* 43, 12386. — Coriander oil used was to 75% sol. in H_2O (as *d*-limonene). Surface tension of these aq. exts. was at 20° 70.8, 64.0, and 42.0 for concns. C equal to 0.017, 0.267, and 1.07 g./l. The exts. were filtered through birch charcoal of 0.1-0.3-cm. grains and 80% porosity until satn. Between 0.17 and 0.83 g./l., the amt. (g.) adsorbed by 1 g. carbon was $0.26 C/(0.18 + C)$. The time of "break-through" t was KL/v , when the length L of the C column varied between 10 and 100 cm. The const. K was 24-100 min./cm. and the const. v was 700-1900 min.; there was no definite effect of either C or the rate of flow (1-2 cm./sec.). The rate of adsorption in its first stages agrees with the theory by Tikhonov, *et al.* (*C.A.* 41, 6791c) i.e., is detd. by the rate of diffusion; but the theory is not valid for the last stages.
J. J. Bikerman

1951

11 VOYTKO, L.M.

2

Investigation of the dynamics of sorption of essential oil of coriander from aqueous solutions on different kinds of carbon. L. M. Voytko and A. N. Kharin (Krasnodarskaya Pedagogical Univ. Teachers' Inst.). *Zh. Prikl. Khim.*, 22, 1217-18 (1949); cf. C.A. 43, 32217. Departures from the sorption theory of Zhukhovitskiy, et al. (C.A. 40, 5119) are connected with the increasing rate of internal diffusion. The static sorption of oil of coriander on 2 types of carbon was studied. Rates of feeding of the aq. solns. of coriander oil and the diam. of the carbon grains were the variables studied. In addn., expts. were made on carbon of mixed particle size under conditions approximating those found in industrial operations. The region of applicability of the Zh., et al. theory extends at a rate of feeding of soln. of 2-3 cm. min. for small particle diam. (0.1 cm.). It was concluded that the kinetic coeffs. of sorption of coriander oil on different kinds of carbon (birchwood, anthracite, and charcoal) obey the same relation to the sp. rate of feeding of soln. and to diam. of carbon particle, viz., $\beta \approx 0.0232 (a_0/d)$. Deviations from the theory increase with increasing diam. of carbon particle and increasing rate of feeding of soln. The extent of deviation, therefore, differs for different kinds of carbon. Voluminous table of data and some pertinent curves accompany the report.

Gladys S. Macy

BELASH, A.E.; LINNIK, G.F., kand. tekhn. nauk; VOYTKO, S.N.

Technical and economic efficiency of automatically controlled
high-capacity rotary bucket excavators. Met. i gornorud. prom.
no.4:68-69 J1-Ag '65. (MIRA 18:10)

VOYTKO, V.

Categories of space and time in classical physics ("History of the development of concepts of space and time in classical physics." M.B. Vil'nitskii. Reviewed by V.Voitko). Visnyk AN URSR 27 no.10:74-77 O '56. (MLRA 10:1)

(Physics--Philosophy) (Space and time)

(Vil'nitskii, M.V.)

VOYTKOVA-LEPSHIKOVA, A. [Vojtkova-Lepsikova, A.]; KOKKOVA-KRATOKHVILOVA, A.
[Kockova-Kratochvilova, A.]; FISHEROVA, M. [Fiserova, M.]; STUKHLIK,
V. [Stuchlik, V.]

Organic acid production in the course of glucose by various species
of Candida. Mikrobiologiya 33 no.6:959-967 N-D '64.

(MIRA 18:4)

1. Khimicheskiy institut Slovatskoy Akademii nauk, Bratislava.

SHUMSKIY, Petr Aleksandrovich; GRAVE, N.A., doktor geograf.nauk, otv.
red.; KONDRAT'YEVA, V.I., red.; VOYTKOVSKAYA, Ye.M., red.;
PARNIKOV, Ye.S., tekhn.red.

[An outline of the history of the study of ground ice] Ocherk
istorii issledovaniia podzemnykh l'dov. Iakutsk, Iakutskoe
izd-vo, 1959. 52 p. (MIRA 13:4)
(Frozen ground)

Voytko, V.I.

3-58-4-3/34

AUTHORS: Vdovichenko, G.G., and Voytko, V.I., Candidates of Philosophical Science

TITLE: Educate Students in the Spirit of Atheism (Vospityvat' studentov v dukhe ateizma)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 4, pp 10-13 (USSR)

ABSTRACT: A course in the "Fundamentals of Atheism", introduced this year at Ukrainian schools, will include 24 lecture hours at the humanitarian and medical vuzes, and 14 hours at other vuzes. It includes the following 9 themes: The Contrast Between Science and Religion; The Science of Religion's Origin; The Origin and Social Principles of Christianity; The Reactionary Nature of Catholicism; The Criticism of the Ideology of Orthodoxy; Religious Sectarianism and its Reactionary Role; Judaism, Buddhism, Islam; The Attitude of the Communist Party and Soviet State Towards Religion and Church; Forms and Methods of Scientific-Atheistic Propaganda.

AVAILABLE: Library of Congress

Card 1/1

VOYTKO, V.I., dotsent, kand.filosofskikh nauk

The building of communism and the problems of radio electronics.
Izv. vys. ucheb.; radiotekh. 5 no.1:3-8 Ja-P '62. (MIRA 15:5)

1. Zaveduyushchiy kafedroy dialekticheskogo i istoricheskogo
materializma Kiyevskogo ordena Lenina politekhnicheskogo
instituta.

(Communism)

(Electronics)

SHIMANOVICH, A. N.; PYATNITSKAYA, V. S.; KHAZINA, B. N.; VOYTKOVICH, I. I.

Parenchymatous keratitis in acquired syphilis. Vest. dermat. i ven. 36 no.7:67-68 J1 '62. (MIRA 15:7)

1. Iz kafedry dermato-venerologii Belorusskogo instituta usovershenstvovaniya vrachey (zav. - dotsent N. F. Pavlov) i Slutskoy polikliniki.

(SYPHILIS) (CORNEA—DISEASES)

VOYTKOVSKIY, K.F.; KRYLOV, M.M., otvetstvennyy redaktor; PORKHAYEV, G.V.,
~~otvetstvennyy~~ otvetstvennyy redaktor; DOBROSMYSLOV, A.A., redaktor; POLYAKOVA, T.,
tekhnicheskiiy redaktor

[Calculation for structures made of ice and snow] Raschet sooruzhenia
iz l'da i snega. Moskva, Izd-vo Akademii nauk SSSR, 1954. 133 p.
(Building, Ice and snow) (MLRA 8:3)

VOYTKOVSKIY, K.F.

Use of the "reduced coefficient of heat capacity" in calculating
the freezing and thawing depth of ground. Mat.k osn.uch.o merz.
zon.zem.kory no.2:65-74 '55. (MIRA 13:9)
(Frozen ground)

VOYTKOVSKIY, K. F.

SUBJECT USSR / PHYSICS
 AUTHOR VOYTKOVSKIY, K. F.
 TITLE The Plastic Through-Bend of Ice Beams.
 PERIODICAL Dokl. Akad. Nauk, 110, fasc. 3, 383-386 (1956)
 Issued: 12 / 1956

CARD 1 / 2

PA - 1667

These bending tests, which were carried out from 1954 to 1955 at the Institute of Frost Research of the Academy of Science of the USSR lasted up to 3000 hours. The temperature was sufficiently stable on these occasions and stress on the beams was relatively low. This made it possible to obtain precise data concerning some rules of plastic deformation. For these tests prismatic ice beams measuring 10 x 10 x 120 cm and one beam (No 10) with 15 x 15 x 120 cm were used: a) Beams, which were cut out from ice which froze in an open reservoir. The optical axis of most crystals is vertical. (No 2,5). b) Beams as under a), but with horizontal optical axes which are directed vertically to the longitudinal axis of the beam (No 1,4,10). c) Beams of ice with irregular structure which was formed by the freezing of a mixture of fragments of ice, snow, and water. Each beam rested upon an immobile and on a mobile support with 100 cm spacing. The beams became bent by their own weight and by two additional symmetrically arranged weights with 30 cm spacing. The through-bend was measured with 0,01 mm accuracy at 1/2 and at 1/4 of the span by clocklike indicators. The first series of measurements was intended to determine the temperature dependence of the through-bend. For this purpose the beams Nos. 1,2,3 were examined at different temperatures ranging from -1 to -10°. This temperature dependence

Dokl.Akad.Nauk, 110, fasc.3,383-386 (1956) CARD 2 / 2

PA - 1667

of the through-bend can be expressed at a temperature of from -1 to -10° in first approximation by the following formula: $\delta = k_0 / (1 + \theta)$. Here δ denotes the through-bend velocity of the beam, θ - the absolute value of the negative ice temperature in $^{\circ}\text{C}$, k_0 - a constant coefficient (which differs in each individual case).

The second measuring series investigated the dependence of the through-bend velocity on the load. Measuring extended over a considerable period. Whenever a beam is subjected to stress the first thing to be noticed is a sharp increase of deformation, after which the velocity of deformation diminishes more and more, tending towards a constant limit value which depends on the given load. In the case of bending to a rather considerable extent (of up to 80 mm) the velocity of bending was found to be constant in the case of a bending stress of from 3- to 5 days duration. The steadied velocities of the individual beams are shown in a table. It is true that $\delta_{\infty} = k P^n$, where δ_{∞} denotes the through-bend velocity, P - the value of the computed load, and n - a constant (which in the cases investigated here amounts to $n \sim 2$). In the course of the investigations discussed here no so-called elasticity limit of the ice was determined.

INSTITUTION: Institute of Frost Research of the Academy of Science in the USSR

VOYTKOVSKIY, K.F.

Creep of frozen ground in pure shear. Trudy Sev.-Vost.otd.Inst.merzl.
AN SSSR no.1:35-45 '58. (MIRA 16:12)

VOYTKOVSKIY, K.F.; VOTYAKOV, I.N.

Conditions governing the construction in the Mirnyy region in the
Yakut A.S.S.R. Trudy Sev.-Vost.o td.Inst.merzl.AN SSSR no.1:21-28
'58. (MIRA 16:12)

VOITKOVSKIY, K.F.

Determining the settling rate of permanently frozen soils during
thawing under conditions prevailing in their natural location.
Izv. Sib. otd. AN SSSR no.10:40-46 '58. (MIRA 11:12)

1. Severo-Vostochnoye otdeleniye Instituta merzlotovedeniya AN SSSR.
(Frozen ground)

KOZHEVNIKOV, N.A., inzh.; VOYTKOVSKIY, K.F., kand. tekhn. nauk; ZIL'BERBORD,
A.F., gornyy inzh.; SHUMOV, A.I., gornyy inzh.

"Principles of mining engineering in conditions of permafrost"
by V.P. Bakakin. Reviewed by N.A. Kozhevnikov and others. Gor.
zhur. no. 2:78-79 Y '59. (MIRA 12:2)

1. Severo-Vostochnoye otdeleniye Instituta merzlotovedeniya
AN SSSR, Yakutsk.

(Mining engineering) (Frozen ground)

(Bakakin, V.P.)

VOYTKOVSKIY, K.F.

Rate of plastic deformation of polycrystalline ice. Izv. Sib.
otd. AN SSSR no. 4:3-16 '59. (MIRA 12:10)

1. Severo-Vostochnoye otdeleniye Instituta merzlotovedeniya
Akademii nauk SSSR.

(Ice)

SOV/5132

PHASE I BOOK EXPLOITATION

Voytkovskiy, Kirill Fabianovich

Mekhanicheskiye svoystva l'da (Mechanical Properties of Ice) Moscow, Izd-vo AN SSSR, 1960. 98 p. Errata slip inserted. 1,6000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Severo-Vostochnoye otdeleniye instituta merzlotovedeniya imeni V. A. Obrucheva.

Resp. Ed.: P. I. Mel'nikov; Ed. of Publishing House: I. N. Nikolayeva; Tech. Ed.: I. F. Koval'skaya.

PURPOSE: This book is intended for personnel concerned with the physical and mechanical properties of ice.

COVERAGE: The book is based on a general summary of information contained in the literature in the field, and on experimental work carried out by the author in 1954-1958 at the Institut merzlotovedeniya imeni V. A. Obrucheva AN SSSR (Institute of Permafrost Study imeni V. A. Obruchev, AS USSR). The author

Card 1/3

Mechanical Properties of Ice

SOV/5132

- thanks N. A. Tsytovich, Corresponding Member AS USSR, S. S. Vyalov, Professor, and B. A. Savel'yev, Professor, for their advice. There are 65 references: 45 Soviet, 15 English, 4 German, and 1 Swedish.

TABLE OF CONTENTS:

Foreword	3
Ch. I. Structure and Physical Properties of Ice	5
Ch. II. Basic Regularities of Ice Deformation	13
Ch. III. Elastic Properties of Ice	34
Ch. IV. Creeping [Properties] of Ice	47
Ch. V. Limit of Ice Strength	79

~~Card 2/3~~

Voytkovskiy, K.F.

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

35. B. N. Belykh (Moscow): On the solution of the dynamic contact problem for a half-space under conditions of axial symmetry.
36. J. Bello (Brestskaya): Microscopic plates with discontinuous supports.
37. B. N. Belykh (Moscow): On the essential non-linearity of certain problems in elastostatics.
38. B. N. Belykh (Moscow): On the determination of the stability of a half-space under alternating random loads.
39. A. I. Buzik (Kiev): An experimental investigation of the stability of a half-space under alternating random loads.
40. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
41. A. I. Buzik (Kiev): On the stability of nonuniformly deformed plates.
42. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
43. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
44. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
45. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
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66. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
67. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
68. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
69. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.
70. B. N. Belykh (Moscow): On the stability of nonuniformly deformed plates.

S/020/60/135/005/011/043
B019/B067

AUTHOR: Voytkovskiy, K. F.

TITLE: Creeping of Ice and Frozen Grounds With Complex States of Tension

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 5, pp. 1079-1082

TEXT: This report was delivered at the First All-Union Conference on Theoretical and Applied Mechanics in Moscow on January 28, 1960. To study the creeping of ice, the author made long-term experiments in ice and frozen ground (up to 5,000 hours). In the introduction, he gives a formula for the deviator of the deformation rates of pure ice which he had derived earlier (Ref. 2):

$$D_{\dot{\epsilon}} = \frac{KS^{n-1}D_{\dot{\sigma}}}{(1 + |\theta|)^2} \quad (1)$$

The author considers the frozen ground to be mineral particles embedded in ice. This concept was confirmed by examining steel balls embedded in ice. The fact whether the embedded particles touch one another or not

Card 1/3

Creeping of Ice and Frozen Grounds With
Complex States of Tension

S/020/60/135/005/011/043
B019/B067

largely influences the creeping of frozen ground. Formula $\dot{\gamma}_1 = k\tau^n$ (3) is given for the creeping velocities of pure ice, formula $\dot{\gamma}_2 = kc_k^n \tau^n$ (7) for ice containing mineral inclusions. After initial creeping deformation of ice-saturated ground is stopped if the condition $\tau \leq \tau_{\text{limit}}$ holds for the shearing stress. If this condition is not satisfied, $\dot{\gamma}_3 = k(\tau - \tau_{\text{limit}})^n$ for the steady creeping velocity at $\tau_{\text{ice}} = \tau - \tau_{\text{limit}}$. If $\tau - \tau_{\text{limit}} = \tau_{\text{sm}}$, the following holds for the creeping velocity: $\dot{\gamma}_3 = kc_k^n (\tau - \tau_{\text{limit}})^n$. The quantities used in the formulas denote the following: $D\sigma$ = stress deviator, S = intensity of tangential stresses, θ = ice temperature, n and K are coefficients depending on the structure of ice. Furthermore, $k = K/(1 + |\theta|)$; τ_{limit} is a certain limit of shearing stress, $\tau_{\text{ice}} = \tau_c$, where c_k is a coefficient characterizing the stress concentration in ice. S. S. Vyalov is mentioned. There are 3 figures and 4 references: 3 Soviet and 1 US.

Card 2/3

Creeping of Ice and Frozen Grounds With
Complex States of Tension

S/020/60/135/005/011/043
B019/B067

ASSOCIATION: Institut merzlotovedeniya im. V. A. Obrucheva Akademii
nauk SSSR (Institute of Permafrost Study imeni V. A.
Obruchev of the Academy of Sciences USSR)

PRESENTED: March 21, 1960, by D. I. Shcherbakov, Academician

SUBMITTED: March 18, 1960

Card 3/3

URODSKAYA, Alla Georgiyevna; VOYTKOVSKIY, K.F., kand. tekhn. nauk,
otv. red.; KONDRAT'YEVA, V.I., red. izd-va; MAKOGONOVA, I.A.,
tekhn. red.

[Compressibility of frozen ground] Szhimaemost' merzlykh grun-
tov. Moskva, Izd-vo Akad. nauk SSSR, 1962. 81 p.
(MIRA 15:10)

(Frozen ground--Testing)

ZIL'BERBORD, Anatoliy Feliksovich; VOYTKOVSKIY, K.F., doktor tekhn.
nauk, otv. red.; BRODSKAYA, A.G., red.; SIMKINA, G.S.,
tekhn. red.

[Heat regime in mines in areas of permanently frozen ground]
Teplovoi rezhim shakht v oblasti rasprostraneniia mnogoletne-
merzlykh gornyykh porod. Moskva, Izd-vo Akad.nauk SSSR, 1963.
93 p. (Frozen ground) (MIRA 16:4)
(Mine ventilation--Cold weather conditions)

VOYTKOVSKIY, K.F., doktor tekhn. nauk, otv. red.; STOLYAROV, A.G.,
red. izd-va; GUS'KOVA, O.M., tekhn. red.

[Strength and creep of frozen grounds] Prochnost' i polzuchest'
merzlykh gruntov. Moskva, Izd-vo Akad.nauk SSSR, 1963. 217 p.
(MIRA 16:7)

1. Akademiya nauk SSSR, Sibirskoye otdeleniye. Institut merzlo-
tovedeniya.

(Frozen ground)

VOYTKUNSKIY, Ya I

Soprotivleniye vody dvizheniyu sudov (Water resistance to movement of ships, by) P. A .
Apukhtin i Ya, I. Voytkunskiy. Moskva, Masgiz, 1953. 356 p. diagr., tables.

N/6
613.23
.A6

VOYTKUNSKIY, Ya.I., kandidat tekhnicheskikh nauk; SHEBALOV, A.N.,
Inzhener.

Characteristics of rolling in river vessels. Trudy VNIIOSS
6 no.1:59-63 '53. (MLRA 9:11)

(Inland navigation) (Stability of ships)

"APPROVED FOR RELEASE: 08/09/2001

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"APPROVED FOR RELEASE: 08/09/2001

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APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861120014-7"

124-57-2-1953

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 67 (USSR)

AUTHORS: Voytkunskiy, Ya.I., Meylunas, V.F.

TITLE: Investigation of the Hydrodynamic Characteristics of Ships Making Headway and Engaged in a Yawing Motion About a Vertical Axis
(Issledovaniye gidrodinamicheskikh kharakteristik sudov pri dvizhenii lagom i vrashchenii vokrug vertikal'noy osi)

PERIODICAL: Tr. Leningr. korablestroit. in-ta, 1954, Vol 14, pp 74-82

ABSTRACT: Results obtained from experiments with three models of tug-boats are described. During a stationary headway motion of the models, characterized by Froude numbers relative to the width of up to 0.30 - 0.34, the magnitudes of the hydrodynamic resistance were determined, as well as the heeling moments for a number of constant values of the angle of heel. It is shown that during such a movement the point of intersection of the direction of the force exerted by the water on the model with its diametral plane is located between the waterline and the initial metacenter; the location of the point and the magnitude of the resistance coefficient depend only very slightly on the speed. In addition, the article

Card 1/2

124-57-2-1953

Investigation of the Hydrodynamic Characteristics of Ships (cont.)

inertia of the water during nonstationary headway motion of the models without heeling or yawing about the vertical axis through the center of gravity. The magnitudes of the moments of the hydrodynamic forces are given for a constant-speed rotation. All these data may be utilized to evaluate the stability during the impingement of jerks from the towing cable, or under the action of a wind, as well as in the calculation of the warping and alongside docking of ships having shapes similar to those of the models investigated.

I. P. Lyubomirov

1. Ships--Motion 2. Ship--Yaw 3. Ships--Hydrodynamic characteristics

Card 2/2

10(4); 31(4,5)

PHASE I BOOK EXPLOITATION

BOV/3035

Voytkunskiy, Ya. I.

Dinamika vyazkoy zhidkosti; konspekt lektsiy (Dynamics of Viscous Liquids; Course of Lectures) Leningrad, 1958. 176 p. 200 copies printed.

Sponsoring Agency: Leningradskiy korablestroitel'nyy institut.

Scientific Ed.: K.K. Pedyayevskiy, Professor, Doctor of Technical Sciences.

PURPOSE: This book is intended for students at shipbuilding institutes and may also be useful to engineers engaged in hydrodynamic research.

COVERAGE: The book constitutes a course of six lectures given at the Leningrad Shipbuilding Institute. It covers the basic phenomena of the forces acting on bodies moving through fluids under laminar and turbulent flow conditions. Hydrodynamic equations are derived and methods for attaining solutions are discussed. Methods for determining drag in hydrodynamic testing are also considered. No personalities are mentioned. There are 10 Soviet references.

Card 1/5

Dynamics of Viscous Liquids; Course of Lectures

80V/3035

TABLE OF CONTENTS:

Introduction	1
Ch. I. Forces Arising From the Motion of a Body in a Liquid	4
1. Force distribution and general relationships	4
2. General formulas for calculating the hydrodynamic forces and moments for flows around bodies	13
Ch. II. Drag of Bodies in a Continuous Medium at Small Reynolds Numbers	17
3. Solution of the problems without consideration of the forces of inertia	17
4. More accurate solution of the problem of motion of a body in a viscous fluid	25
Ch. III. Theory of the Laminar Boundary Layer	32
5. Characteristics of the motion of a body at large Reynolds numbers	32

Card 2/5

Dynamics of Viscous Liquids; Course of Lectures

80V/3035

6. Equation of motion of a viscous fluid in the boundary layer	
7. Flow around a flat plate placed along the direction of the flow	47
8. Integration of the laminar-boundary layer equations for surfaces with a longitudinal pressure drop	52
9. Laminar boundary layer in a flow having a velocity distribution along the outer boundary which can be expressed by a simple power function	54
10. Integral relationship for the boundary layer	57
11. Approximate calculation method for the laminar boundary layer where the velocity-distribution law is given parametrically	64
12. Integration of the form-parameter equation and calculation of the laminar-boundary layer characteristics	69
13. Laminar boundary layer along the line of surface intersection and along plates of finite span	74
Ch. IV. Turbulent Flow of a Liquid	77
14. General characteristics of turbulent flows	77

Card 3/5

Dynamics of Viscous Liquids; Course of Lectures	SOV/3035	
15. Equations of the hydrodynamics of turbulent flows		82
16. Theory of plane-parallel turbulent flow		86
17. Problems of internal drag in the case of turbulent flow		92
18. Effect of surface roughness on the drag of pipes		98
Ch. V. Problems of External Drag for Turbulent Flow		102
19. Transition from laminar to turbulent flow in the boundary layer		102
20. Turbulent boundary layer		111
21. Turbulent boundary layer along a flat smooth plate		113
22. Calculation of the plane turbulent layer in the presence of a longitudinal pressure drop		123
23. Flow around rough surfaces		138
Ch. VI. Viscous Drag of Bodies		147
24. Viscous drag and its properties		147
25. Determining the drag due to viscosity from the characteristics of the flow behind the body		155
26. Methods for calculating the viscous drag of well streamlined bodies		158

Card 4/5

Dynamics of Viscous Liquids; Course of Lectures

80V/3035

27. Calculations of the drag of poorly streamlined bodies

166

Bibliography

173

AVAILABLE: Library of Congress (QA929.V7)

Card 5/5

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2-4-60

VOYTKUNSKIY, Ya.I., kand.tekhn.nauk; KATSMAN, F.M., inzh.; FADDEYEV, Yu.I.,
kand.tekhn.nauk; YAKONOVSKIY, S.V., inzh.

Towing resistance of lifeboats. Sudostroenie 24 no.12:15-20
D '58. (MIRA 12:2)

(Lifeboats)

(Towing)

(Ship resistance)

PHASE I BOOK EXPLOITATION

SOV/4930

Voytkunskiy, Yaroslav Iosifovich, Robert Yakovlevich Pershits,
and Igor' Anatol'yevich Titov

Spravochnik po teorii korablya; khodkost' i upravlyayemost'
(Handbook on the Theory of Ships; [Their] Speed and
Maneuverability) Leningrad, Sudpromgiz, 1960. 688 p.
Errata slip inserted.

Resp. Ed.: Yu. V. Krivtsov and G. A. Firsov; Ed.: A. A.
Osvenskaya; Tech. Ed.: A. I. Kontorovich.

PURPOSE: This handbook is intended for scientific workers
and engineers, and for students of shipbuilding technical
institutes of higher education.

COVERAGE: The authors review basic hydrodynamics and the
application of its laws to the calculation of the re-
sistance of water to the motion of ships. Various means
of propulsion are discussed and practical information on
the maneuverability of ships is given. Parts I and II

~~Card 1/17~~

Handbook on the Theory (Cont.)

SOV/4930

were written by Ya. I. Voytkunskiy; Part III by I. A. Titov; and Part IV by Parshits. The following authors contributed to the writing of this handbook: I. T. Yeterov, Sec. 20 and 22 of Part I and Sec. 30 of Part II; A. A. Rusetskiy, Secs. 16, 17, 18, 19, 21, 23 of Part II, a portion of Sec. 25 of Part III and Ch. VIII of Part IV; V. M. Ivanovskiy and M. M. Zhuchenko, Ch. X of Part III. The authors thank A. M. Basin and I. V. Girsch for their remarks. There are 422 references: 299 Soviet (including 2 translations), 83 English, 36 German and 4 French.

TABLE OF CONTENTS:

Foreword

3

PART I. HYDROMECHANICS

Ch. I. General Information on Hydromechanics
1. Properties of liquids

9

9

Card 2/-17

VOYTKUNSKIY, Ya.I.; ARTYUSHKOV, L.S.

Effect of the shape of hull design on ship propulsion in rough waters. Trudy LKI no.34:29-38 '61. (MIRA 15:8)

1. Kafedra teorii korablya Leningradskogo korablestroitel'nogo instituta.
(Hulls (Naval architecture)) (Ships—Hydrodynamics)

VOYTKUNSKIY, Ya.I.; DUBROVIN, O.V.

Determining the towing efficiency of single-screw coasters.
Trudy LKI no.38:27-42 '62. (MIRA 16:7)

1. Kafedra gidromekhaniki Leningradskogo korablestroitel'nogo
instituta (for Voytkunskiy). 2. Kafedra teorii korablya
Leningradskogo korablestroitel'nogo instituta (for Dubrovin).
(Coastwise navigation) (Towing)

ARTYUSHKOV, L.S., inzh.; VOYTKUNSKIY, Ya.I., kand.tekhn.nauk

Determination of the frictional resistance of seagoing freighters.
Sudostroenie 28 no.2:19-23 F '62. (MIRA 15:3)
(Frictional resistance (Hydrodynamics))

VOYTKUNSKIY, Ya. I., kand. tekhn. nauk

Method of checking the water resistance to a ship's propulsion.
Sudostroenie 28 no.10:7-10 0 '62. (MIRA 16:1)

(Ship resistance)

L 18032-63 EPA(b)/EWT(1)/EDS AEDC/AFFTQ/ASD PA-4
 ACCESSION NR: 1P3000715 S/0258/63/003/002/0262/0270

AUTHOR: Voytkunskiy, Ya. I. (Leningrad)

TITLE: Flow past singularities in a two-fluid system

SOURCE: Inzhenernyy zhurnal, v. 3, no. 2, 1963, 262-270

TOPIC TAGS: vortex, doublet, source and sink, surface wave

ABSTRACT: Solutions have been obtained for hydrodynamic singularities--vortices, sources and doublets--lying above the interface of an immiscible two-fluid system (air flowing over water). It has been assumed that both fluids are unbounded and are moving with constant velocity c . In the first part of the study solutions have been obtained defining a vortex flow field in two dimensions for a vortex of given circulation. The analysis has been carried out in the complex plane z . The results, as shown in equation 1, indicate that the interface is in the form of a regular sinusoidal wave of frequency k_0 , or,

$$\frac{dF_0}{dz} = i\Gamma \frac{a-1}{a+1} \left(k_0 + \nu \frac{1-a}{a-1} \right) e^{-k_0 z} e^{-ik_0 x} \quad (1)$$

Card 1/3

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ACCESSION NR: AP3000715

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where

$\frac{d\phi_0}{dz}$ = induced complex velocity

Γ = gamma function

a = density ratio of the two fluids

h = distance of vortex from interface

ν = g/c^2 (g is the gravity acceleration)

In the second part the analysis has been extended to include a similar solution for a source with strength Q lying above the two-fluid interface and moving with the fluid. The analogous result is given by equation 2:

$$\frac{dF_0}{dz} = Q \frac{a-1}{a+1} \left(k_0 + \nu \frac{a-1}{a+1} \right) e^{-k_0 z} e^{-\nu k_0 z} \quad (2)$$

Card 2/3

L 18032-63

ACCESSION NR: AP3000715

Combining the above results, expressions are obtained for a vortex-source solution and a doublet. Orig. art. has: 78 equations and 2 figures.

ASSOCIATION: none

SUBMITTED: 01Jul62

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: AI

NO REF SOV: 001

OTHER: 001

Card 3/3

BLAGOVESHCHENKIY, S., doktor tekhn.nauk, prof.; VOZNESENSKIY, A., kand.tekhn.nauk; VOYTKUNSKIY, Ya., kand.tekhn.nauk, dotsent; GERASIMOV, A., kand.tekhn.nauk, dotsent; GRECHIN, M., kand.tekhn.nauk; DORIN, V., kand.tekhn.nauk; DOROGOSTAYSKIY, D., doktor tekhn.nauk; KOSOUROV, K., doktor tekhn.nauk, prof.; KRIVTSOV, Yu., kand.tekhn.nauk; MURU, N., kand.tekhn.nauk, dotsent; SEMENOV-TYAN-SHANSKIY, V., doktor tekhn.nauk, prof.; SOLOV'YEV, V., kand.tekhn.nauk, dotsent; TOPOROV, I., inzh.; FIRSOV, G., doktor tekhn.nauk, prof.; FISHER, A., inzh.; KHRUSTIN, V., kand.tekhn.nauk, dotsent; EYDEL'MAN, D., inzh.

Concerning P.Khokhlov's article "Determining the center of gravity of a vessel during an inclining experiment with trim difference."
Mor. flot 23 no.5:33-34 '63. (MIRA 16:9)
(Stability of ships)

YEGOROV, Ivan Timofeyevich; SOKOLOV, Vitaliy Timofeyevich;
VOYTKUNSKIY, Ya.I., kand. tekhn. nauk, retsenzent;
SELYUZHONOK, Ye.F., kand. tekhn. nauk, retsenzent;
RUSETSKIY, A.A., kand. tekhn. nauk, nauchn. red.;
OSVENSKAYA, A.A., red.

[Hydrodynamics of high-speed vessels] Gidrodinamika
bystrokhodnykh sudov. Leningrad, Sudostroenie, 1965.
383 p. (MIRA 18:6)

VOYTOKUSKAYA, S.V.

4685. Peredovoy Savkhoz. (Plem. Sovkhoz. Im. Komi yternal] Smolensk, Kn. 1zd. 1954, 20
S.S ill. 22 Sm. (opyt Uchastnikov Vsesoyuz S.-Kh. ystavki). 3.000 Kz 25K- (55-17) P
338.1150V: 636.2(47:393)

VOYTOLOVSKIY, Viktor Nikolayevich; MAZALOV, Yevgeniy Vasil'yevich;
AZAROV, E.K., red.; LEVONEVSKAYA, L.G., tekhn.red.

[Leningrad industry in the seven-year plan] Leningradskaya
promyshlennost' v semiletke. Leningrad, Lenizdat, 1960. 42 p.
(MIRA 14:3)

(Leningrad Economic Region--Industries)
(Leningrad Economic Region--Economic policy)

VOYTONIS, N. Yu.

"The ontogeny of monkey behavior", (Report 1): N. Yu. Voytonis and N. A. Tikh,
"Results of the first two years of investigations." (Report 2): N. A. Tikh, "The
formation of reflex grasping and holding monkeys," Trudy Sushum. biol. stantsii
Akad. med. nauk SSSR, Vol. I, 1949, p. 164-233.

SO: U-4393, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

8/058/63/000/001/102/120
A062/A101

24,1700

AUTHORS:

Voytonis, V. V., Yakovlev, V. F.

TITLE:

A free quartz interferometer

PERIODICAL:

Referativnyy zhurnal, Fizika, no. 1, 1963, 67 - 68, abstract
1Zh403 (In collection: "Primeneniye ul'traakustik isled. ve-
shchestva.", no. 16, Moscow, 1962, 117 - 120)

TEXT:

The authors report on preliminary results of an experimental test on the possibility of utilizing a free quartz for a study of ultra-sound absorption. An exemplary shape is given of the frequency characteristic of a quartz radiator fixed in the quartz holder of an interferometer. The cause of the various resonance properties of different zones of the radiator surface may reside in the effect of the quartz holder on it. The frequency characteristic was plotted for the quartz cleaned off from the metal coating and placed in an air condenser, with one face of the quartz lying on the lower plate of the condenser and the other being free. Judging on the characteristic, which showed a very sharp peak, the quartz is in this case similar to a piston radiator. For

Card 1/2

A free quartz interferometer

8/058/63/000/001/102/120
A062/A101

verification, an interferometer whose schematic diagram is given, was constructed. Its main feature was the presence of a wire grid at 3 mm from the quartz surface for conserving the homogeneity of the electric field in the space between the plates. The diffraction effects are small enough to be neglected. Primary measurements were carried out in argon on the frequency 497 kc/s with the aid of an interferometer of another design. The results of secondary measurements in argon with the described interferometer are presented in the form of a graph. Calculation of the absorption coefficient, carried out by methods set forth in the article, permits the conclusion that the correction to the indications of the interferometer lies within the error limits. In measurements by a usual interferometer this correction is generally of the same order as the absorption coefficient. 13

I. Nikolayeva

[Abstracter's note: Complete translation]

Card 2/2

S/046/63/009/001/022/026
B104/B186

AUTHORS: Voytonis, V. V., Yakovlev, V. P.

TITLE: Calculation of the ultrasound absorption coefficient from the structure of the peaks of the reaction curve of an interferometer

PERIODICAL: Akusticheskiy zhurnal, v. 9, no. 1, 1963, 116 - 118

TEXT: The calculation of the ultrasound absorption coefficient of gases is based on the theory of interferometers and may be used without any assumptions as to the value of α . Making use of results obtained by U. P. Mezon (P'yezoelektricheskiye kristally i ikh primeneniye v ultra-akustike - Piezoelectric crystals and their utilization in ultraacoustics, M., IL, 1952, p. 279)

$$\alpha = \frac{1}{r_2 - r_1} \left(\operatorname{Arth} \frac{Z_{\lambda/8} - Z_{\min}}{Z_{\max} - Z_{\lambda/8}} - \operatorname{Arth} \frac{Z_{\lambda/8} - Z_{\min}}{Z_{\max} - Z_{\lambda/8}} \right), \quad (5)$$

is obtained, where Z_{\max} and Z_{\min} are the impedances of the interferometer at $r = 2n\lambda/4$ and $r = (2n+1)\lambda/4$, respectively; r is the distance between

Card 1/2

S/046/63/009/001/022/026
B104/B186

Calculation of the ultrasound...

emitter and reflector. $Z_{\lambda/8}$ is the impedances at $r = (2n+1)\lambda/8$. If the high-frequency voltage at the emitter is measured (I. I. Perepechko, V. F. Yakovlev, Akust. zh., 1961, 7, 1, 101 - 102),

$$\alpha = \frac{1}{r_2 - r_1} \left(\operatorname{Arth} \frac{V_{\lambda/8} - V_{2 \min}}{V_{2 \max} - V_{\lambda/8}} - \operatorname{Arth} \frac{V_{\lambda/8} - V_{1 \min}}{V_{1 \max} - V_{\lambda/8}} \right).$$

is obtained.

ASSOCIATION: Moskovskiy oblastnoy pedagogicheskiy institut im. N. K. Krupskoy (Moscow Oblast' Pedagogical Institute imeni N. K. Krupskaya)

SUBMITTED: June 8, 1962

Card 2/2

VOYTOLOVSKIY, Viktor Nikolayevich; AZAROV, E.K., red.; ONOSHKO, N.G.,
tekhn. red.

[Material and technical foundation of communism] Material'no-
tekhnicheskaya baza kommunizma. Leningrad, Lenizdat, 1962. 65 p.
(MIRA 15:5)

(Russia--Industries)

VOYTOLOVSKIY, Viktor Nikolayevich; ZVEREV, Leonid Grigor'yevich;
AZAROV, E.K., red.; PRESNOVA, V.A., tekhn. red.

[Profit of an industrial enterprise] Rentabel'nost' pro-
myshlennogo predpriatiia. Leningrad, Lenizdat, 1961. 28 p.
(MIRA 15:2)
(Leningrad—Industrial management) (Finance)

VOYTONIS, V.V.; YAKOVLEV, V.F.

Interferometer without quartz-holder. Prim.ul'traakust.k issl.
veshch. no.16:117-120 '62. (MIRA 16:4)
(Interferometer)

43202

S/046/62/008/004/002/017
B108/B186

24.18.00

AUTHORS: Bashlachev, Yu. A., Voytonis, V. V., Yakovlev, V. F.

TITLE: An interferometer with two crystal transducers

PERIODICAL: Akusticheskiy zhurnal, v. 8, no. 4, 1962, 412-414

TEXT: An acoustic interferometer with two generating crystals makes it possible to increase the reaction and to study gases and liquids at higher frequencies than with an ordinary interferometer. Each of the two transducers emits ultrasonic waves directed towards the other, thereby superimposing the emitted and reflected waves. It is shown that the interference maxima of both waves appear at every integral multiple of λ and not at every half-integral multiple as in the case of ordinary interferometers. If the amplitudes of the waves emitted from the two transducers are not equal, additional maxima will arise at every $r = (2n+1)\lambda/2$. The absorption coefficient of the fluid under examination can be found from the spacing between the maxima and from the impedance of the interferometer. The accuracy attained with such a two-crystal interferometer is better than with ordinary interferometers. There are 1 figure and 1 table.

Card 1/2

An interferometer with two...

S/046/62/008/004/002/017
B108/B186

ASSOCIATION: Moskovskiy pedagogicheskiy institut im. N. K. Krupskoy
(Moscow Pedagogical Institute imeni N. K. Krupskaya)

SUBMITTED: November 30, 1961

Card 2/2

VOYTONIS, V.V.; YAKOVLEV, V.F.

Calculation of the ultrasonic absorption coefficient based on
the structure of peaks on the interferometric reaction curve.
Akust. zhur. 9 no.1:116-118 '63. (MIRA 16:5)

1. Moskovskiy oblastnoy pedagogicheskiy institut imeni N.K.Krupskoy.
(Ultrasonic waves) (Electroacoustics)

VOYTONIS, V.V.; YAKOVLEV, V.F.

Remarks on the interferometric method of ultrasound absorption
measurement. Akust.zhur. 8 no.1:131-132 '62. (MIRA 15:4)

1. Moskovskiy oblastnoy pedagogicheskiy institut imeni N.K.Krupskoy.
(Ultrasonic waves--Measurement) (Interferometry)

24.1300 (1327, 1482)
24.1800 (1063, 1144)

S/046/62/008/001/015/018
B125/B102

AUTHORS: Voytonic, V. V., Yakovlev, V. F.

TITLE: Remarks on an interferometric method of measuring ultrasonic absorption

PERIODICAL: Akusticheskiy zhurnal, v. 8, no. 1, 1962, 131 - 132

TEXT: The conditions laid down by I. I. Perepenko, V. F. Yakovlev (Akust. zh., 1961, 7, 1, 101 - 102) in the approximate calculation of the ultrasonic absorption coefficient from the tension variation in the quartz of the interferometer are omitted. With the aid of the formulations valid for $r \gg \lambda/4$, $V_{1 \min} = V_0' \operatorname{th}(\alpha r_1 + \beta) + V''$, $V_{2 \min} = -V_0' \operatorname{th}(\alpha r_2 + \beta) + V''$, the solution $\alpha = \frac{1}{r_2 - r_1} (\operatorname{Arth} NR - \operatorname{Arth} N/R)$ (4) is obtained from

$$\begin{aligned} V_{1 \max} &= V_0' \operatorname{cth}(\alpha r_1 + \beta) + V'', \quad V_{1 \min} = V_0' \operatorname{th}\left(\alpha r_1 + \frac{\alpha \lambda}{4} + \beta\right) + V'', \\ V_{2 \max} &= V_0' \operatorname{cth}(\alpha r_2 + \beta) + V'', \quad V_{2 \min} = V_0' \operatorname{th}\left(\alpha r_2 + \frac{\alpha \lambda}{4} + \beta\right) + V''. \end{aligned} \quad (1)$$

Card 1/3

Remarks on an interferometric...

S/046/62/008/001/015/018
B125/B102

$$N = \frac{V_{2 \min} - V_{1 \min}}{V_{1 \max} - V_{2 \max}} = \text{th } \varphi_1 \cdot \text{th } \varphi_2, \quad (2)$$

$$R = \frac{V_{1 \max} - V_{1 \min}}{V_{2 \max} - V_{2 \min}} \approx \frac{\text{th } \varphi_2}{\text{th } \varphi_1},$$

, and

$$R = \frac{V_{1 \max} - V_{2 \min}}{V_{2 \max} - V_{1 \min}} = \frac{\text{cth } \varphi_1 - \text{th } \varphi_2}{\text{cth } \varphi_2 - \text{th } \varphi_1} = \frac{\text{th } \varphi_2}{\text{th } \varphi_1}. \quad (3)$$

$\text{th}^2 \varphi_1 = N/R$, $\text{th}^2 \varphi_2 = NR$, or $\alpha \varphi_1 + \beta = \text{Arth}(N/R)$, $\alpha \varphi_2 + \beta = \text{Arth}(NR)$. $\alpha + \beta$ need not be assumed small for (3). The only restriction remaining for (4), $r \gg \lambda/4$, can be observed in media with very strong absorption. In this case, the restriction can be avoided by using the two adjacent minima lying close to V_{\max} . This corresponds to the replacement of the hyperbolic tangent curves lying between two adjacent minima by a straight line. There is 1 Soviet reference.

Card 2/3

Remarks on an interferometric...

S/046/62/008/001/015/018
B125/B102

ASSOCIATION: Moskovskiy oblastnoy pedagogicheskiy institut im. N. K.
Krupskoy (Pedagogical Institute imeni N. K. Krupskaya
of the Moskovskaya Oblast')

SUBMITTED:: June 9, 1961

Card 3/3

ACC NR: AP6029527

(N)

SOURCE CODE: UR/0046/66/012/003/0296/0300

AUTHOR: Voytonis, V. V.; Yakovlev, V. F.

ORG: Moscow Regional Pedagogical Institut im. N. K. Krupskaya (Moskovskiy oblastnoy pedagogicheskiy institut)

TITLE: Measurement of absorption of ultrasound in gases by an acoustic interferometer method

SOURCE: Akusticheskiy zhurnal, v. 12, no. 3, 1966, 296-300

TOPIC TAGS: ultrasound absorption, acoustic measurement, interference measurement, absorption coefficient, quartz crystal, argon, xenon, relaxation process

ABSTRACT: The authors point out that in spite of its high precision, the acoustic interferometer has not been used extensively for the measurement of absorption of ultrasound, and that experimental results obtained by various workers differ greatly from one another. The authors therefore analyze the causes of the low accuracy of interferometric measurements of the absorption coefficient, and suggest that the main reason is that even when the acoustic length of the interferometer is changed considerably, the difference between neighboring voltage minima amounts to only several per cent of the resonant peak of the interferometer. This small quantity can be subject to large error if the apparatus is not perfectly stable. The maximum and minimum values of the voltage on the quartz crystal at the extremal points are determined in terms of the voltage of the equivalent generator and the circuit parameters, and an

Card 1/2

UDC: 534.286-8/ 534.231.1-13

ACC NR: AP6029527

expression for the impedance of the interferometer and for the voltage on the plate is derived by a graphic construction. A graphic method is then presented for the calculation of the ultrasound absorption coefficient, the results of which are compared with results of measurements in argon and xenon. The measurements agree with the theoretical predictions. An advantage of the proposed calculation method is that no additional corrections for the absorption coefficients are necessary, making it especially advantageous for the investigation of gases in the region of relaxation processes. Orig. art. has: 3 figures, 2 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 10Nov64/ ORIG REF: 004/ OTH REF: 011

Card 2/2

ACC NR: AR6023295

SOURCE CODE: UR/0058/66/000/003/1069/1069

AUTHOR: Voytonis, V. V.; Yakovlev, V. F.

TITLE: Calculation of the absorption coefficient of ultrasound from the structure of the peak on the interferometer reaction curve

SOURCE: Ref zh. Fizika, Abs. 3Zh482

REF SOURCE: Tr. 1-y Mezhd. nauchn. konferentsii po primeneniyu molekul. akust. k issled. veshchestva i v nar. kh-ve. Tashkent, 1964, 175-180

TOPIC TAGS: ultrasound absorption, interference measurement, absorption coefficient, acoustic damping, error minimization

ABSTRACT: The possibility is considered of increasing the accuracy of measurement of attenuation of ultrasound with the aid of an interferometer, by taking into account the influence of certain uncontrollable errors, for example the frequency drift or the change in the generator amplitude. To eliminate the influence of such uncontrollable errors, it is proposed to carry out the calculation in terms of several quantities, which are measured almost simultaneously and depend little on the general variations of the envelope of the reaction curve. The calculation of the attenuation coefficient is based on three values of the high frequency-voltages across a quartz converter at points $r = (2n + 1)\lambda/8$, where λ is the sound wavelength and n is an integer. The proposed method is applicable for the reduction of the results of measurements of attenuation in argon and in xenon. V. Lyamov. [Translation of abstract]

SUB CODE: 20

Card 1/1

KORNFEL'D, V.N., kand.tekhn.nauk; VOYTOV, A.O., inzh.; SHTEYNBERG, I.S.,
inzh.; GREKOV, Ye.A., inzh.

Control of open-hearth furnace smelting by the composition and
temperature of combustion products. Stal' 21 no.10:950-958 0
'61. (MIRA 14:10)

1. TSentroenergochermet i Tsentral'nyy nauchno-issledovatel'skiy
institut chernoy metallurgii.
(Open-hearth furnaces--Combustion)

GARCHENKO, " T.; BALAKIN, F.N.; YEFIMOV, L.M.; POGORELYY, V.P.; GREKOV,
Ye.A.; KORKOSIKO, N.M.; VORONOV, Yu.F.; POLTAVETS, Ye.I.; VOYTOV,
A.O.; SHTEYNBERG, L.S.

Production of steel in large-capacity open-hearth furnaces with
blowing of oxygen through the bath. Stal' 25 no.2:116-121 F '65.
(MIRA 18:3)

VOYTOV, A. O.

PA - 2414

AUTHOR KORNFEL'D V.N. cand.tech., VOYTOV A.O., KOSHELEV V.I., eng.
TITLE Smoke Temperature at the Outlet from the Working Space of an Open-Hearth Furnace. (Temperatura dyma u vykhoda iz rabochego prostranstva martenovskoy pechi. Russian)
PERIODICAL Stal' 1957, Vol 17, Nr 3, pp 213 - 219 (U.S.S.R.)
ABSTRACT Received: 5/1957 Reviewed: 5/1957
 In 1954 and 1955 the smoke temperatures in the vertical channels of the 200 t open-hearth furnaces with magnesite chromite vaults and with heads of forsterite-bricks were measured in the course of more than 60 smelting operations. They were carried out without using oxygen and with an enriched air with 25 and 30% O₂. The smoke temperatures were measured in the rear vertical air channel and in individual cases also in the front air channel and in the vertical gas channel at the height of the window sills. A sucking-off pyrometer with a tungsten-molybdenum element was used as measuring device. The smoke temperature at the outlet of the working space of an open-hearth furnace changes within a wide range corresponding to the smelting process and mainly depends on whether the heat strain corresponds to the technological processes and to the intensity of the exothermal reactions in the liquid bath. If this is the case the enrichment of the air by oxygen does not exercise any

CARD 1/2

PA - 2414

Smoke Temperature at the Outlet from the Working Space of an Open-Hearth Furnace.

influence on the smoke temperature which, on the average, is 1580° in the upper part of the vertical channels and about 1610° at the outlet from the working space. In the time between the switching over of the valves the smoke temperature rises with decreasing velocity during all periods of smelting, with the exception of that of the charging, and tends towards torch temperature. The rate of the temperature rise is the greater the more intensive the heat absorption of the burden (of the trough) is reduced and the smaller the consumption coefficient of the fuel becomes. Smoke temperature is the most sensitive impulse for an automatic control of heat and a continuous measuring of the temperature of the smoke can be used for regulating the heat supply and heat removal in the working space. (With 8 illustrations and 9 citations from slav publications.)

ASSOCIATION: not given
PRESENTED BY: -
SUBMITTED: -
AVAILABLE Library of Congress

CARD 2/2

KORNFEL'D, Vladimir Naumovich; VOYTOV, Anatoliy Olimpiyevich;
SHTEYNBERG, Leonid Solomonovich

[Heat processes in open-hearth furnaces using oxygen]
Teplovaia rabota martenovskoi pechi s primeneniem kis-
loroda. Moskva, Metallurgiya, 1964. 327 p.
(MIRA 17:12)